AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1.   (Currently Amended) A data processing device for registration of a first image of an object, which first image was obtained with a first imaging method having a second image of the object, which second image was obtained with a second imaging method different from the first imaging method, wherein the data processing device is equipped for executing the following steps:

a)   ~~Generating~~ generating a first transformed image from the first image, in which characteristic image features of the first imaging method are reduced ~~and/or~~or characteristic image features of the second imaging method are intensified;

b)   ~~Generating~~ generating a second transformed image from the second image, in which, optionally characteristic image features of the second imaging method are reduced and optionally, characteristic image features of the first imaging method are intensified, where areas of at least one of the transformed images are masked and where at least one of the imaging methods does not supply reliable information; and

c)   registering ~~Registration of~~ the transformed images.

2.   (Previously Presented)   A data processing device as claimed in claim 1, wherein the imaging methods comprise the application of different modalities, wherein one of the modalities is a computer tomography, an X-ray projection, a magnetic resonance imaging method, an ultrasound method, an X-ray fluoroscopy or a CT- fluoroscopy and wherein the image obtained thereby is two dimensional or three dimensional.

3.   (Previously Presented)   A data processing device as claimed in claim 1, wherein the imaging methods were generated with the same modality with different imaging conditions.

4.   (Previously Presented)   A data processing device as claimed in claim 1, which is arranged for executing a feature-based registration of the transformed images.

5.   (Previously Presented)   A data processing device as claimed in claim 1, which is arranged for segmenting object areas with different material composition in at least one of the images.

6.   (Currently Amended) A data processing device as claimed in claim 1, ~~which is arranged for masking areas of the transformed images, in which at least one of the~~where an imaging ~~methods~~ method that does not supply reliable information is an imaging method not performed in real time and where an imaging method that does supply reliable information is an imaging method performed in real time.

7.   (Currently Amended) A data processing device as claimed in claim 1, which is arranged for considering ~~the~~ positions measured with the help of a position-measuring apparatus ~~and/or~~or a calibration of the images during the registration.

8.   (Currently Amended) A data processing device as claimed in claim 1, which is arranged for using ~~the~~a flexible registration method.

9.   (Currently Amended) ~~A process for registration of a first image of an object, which first image was obtained with a first imaging method, with a second image of the object, which second image was obtained with the second imaging method, different from the first imaging~~A method, comprising ~~the following steps~~:
        a)   ~~Generating~~ generating ~~of~~ a first transformed image from the first image obtained from a first imaging method;
        generating a second transformed image from a second image obtained for a second imaging method, ~~in which~~where characteristic image features of the first imaging method are reduced in the first transformed image ~~and/or~~or characteristic image features of the second imaging method are intensified in the first transformed image, where characteristic image

features of the second imaging method are reduced in the second transformed image or characteristic image features of the first imaging method are intensified in the second transformed image, where the first transformed image and the first image are different images, where the second transformed image and the second image are different images, and where the first imaging method and the second imaging method are different imaging methods; and

b)   ~~Generating of a second transformed image from the second image, in which~~ ~~optionally characteristic image features of the second imaging method are reduced and optionally~~ ~~characteristic image features of the first imaging method are intensified;~~

~~c)~~   ~~Registration~~ registering the first transformed image and the second transformed image~~of the transformed images~~.

10.   (Currently Amended) A ~~process~~ method as claimed in claim 9, wherein~~, the steps a), b)~~ ~~and c)~~ generating the first transformed image, generating the second transformed image, and registering the first transformed image and the second transformed image are repeated ~~many~~ ~~times~~at least a second time with variation of at least one of the transformed images, in order to maximize a degree of similarity between the transformed images.

11.   (New) A data processing device as claimed in claim 1, being equipped for executing the following steps:
        generating a first transformed image from the first image, in which characteristic image features of the first imaging method are reduced; and
        generating a second transformed image from the second image, in which characteristic image features of the second imaging method are reduced.

12.   (New) A data processing device as claimed in claim 1, being equipped for executing the following steps:
        generating a first transformed image from the first image, in which characteristic image features of the first imaging method are reduced; and

generating a second transformed image from the second image, in which, characteristic image features of the first imaging method are intensified.

13.   (New) A data processing device as claimed in claim 1, being equipped for executing the following steps:

generating a first transformed image from the first image, in which characteristic image features of the second imaging method are intensified; and

generating a second transformed image from the second image, in which, characteristic image features of the second imaging method are reduced.

14.   (New) A data processing device as claimed in claim 1, being equipped for executing the following steps:

generating a first transformed image from the first image, in which characteristic image features of the second imaging method are intensified; and

generating a second transformed image from the second image, in which characteristic image features of the first imaging method are intensified.

15.   (New) A data processing device as claimed in claim 1, where the first transformed image is an image type consistent with output of the first imaging method and where the second transformed image is an image type consistent with output of the second imaging method.

16.   (New) A data processing device as claimed in claim 1, where an output from registering the transformed images is configured for use during a surgical operation.

17.   (New) A data processing device as claimed in claim 1, where the first imaging method is an ultrasound imaging method and where the second imaging method is a Computer Tomography imaging method or a Magnetic Resonance imaging method.

18.   (New) A data processing device as claimed in claim 6, where the first imaging method is not performed in real time and where the second imaging method is performed in real time.

19.   (New) A data processing device as claimed in claim 8, where the flexible registration method considers effects of deformation of a tissue of the object or considers an organ shift of an organ of the object.

20.   (New) A method, comprising:

    segmenting a three-dimensional Computer Tomography (CT) image from an original CT image;

    generating a two-dimensional test image from the original CT image A, wherein the characteristic image features of an ultrasound system are taken into consideration;

    masking at least a portion of the two-dimensional test image, where the portion does not contain reliable image information about the object;

    generating a transformed ultrasound image from an original ultrasound image, where the original ultrasound image is of a non-masked portion of the two-dimensional test image;

    registering the two-dimensional test image and the transformed ultrasound image;

    calculating a degree of similarity between two-dimensional test image and the transformed ultrasound image; and

    increasing the degree of similarity.